Atty Docket No.: R0142B-REG USSN: 10/663,335

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Claim Listing

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1. (Previously Presented) A compound of the formula:

$$\mathbb{R}^2$$

$$\mathbb{S}(0)_n - \mathbb{R}^1$$

$$\mathbb{R}^3$$

or a pharmaceutically acceptable salt thereof, wherein

n is 2;

p is 1 or 2;

R¹ is aryl;

R² is a heterocyclyl;

R3 is hydrogen or alkyl; and

each R⁴ is independently hydrogen, hydroxy, cyano, alkyl, alkoxy, thioalkyl, alkylthio, halo, haloalkyl, hydroxyalkyl, nitro, alkoxycarbonyl, alkylcarbonyl, alkylsulfonyl, arylsulfonyl, haloalkylsulfonyl, amino, alkylamino, dialkylamino, alkylcarbonylamino, alkylaminocarbonyl, alkylcarbonylamino, alkylaminosulfonyl, alkylsulfonylamino or methylenedioxy.

- 2. (Original) The compound according to Claim 1, wherein p is 1 and R^4 is located at the 6-position of the indole ring system.
- 3. (Original) The compound according to Claim 1, wherein R² is optionally substituted piperazin-1-yl or optionally substituted piperidin-4-yl.

Atty Docket No.: R0142B-REG USSN: 10/663,335

- 4. (Original) The compound according to Claim 3, wherein R² is piperazin-1-yl, 4-methylpiperazin-1-yl, 3,5-dimethylpiperazin-1-yl, N-methyl piperidin-4-yl or piperidin-4-yl.
- 5. (Original) The compound according to Claim 4, wherein R² is 4-methylpiperazin-1-yl.
- 6. (Previously presented) The compound according to Claim 3, wherein R¹ is optionally substituted phenyl.
- 7. (Previously Presented) The compound according to Claim 6, wherein R¹ is phenyl which is optionally substituted with alkyl, halo, or haloalkyl.
- 8. (Previously presented) The compound according to Claim 7, wherein R¹ is phenyl, 2,3-dichlorophenyl, 2-fluorophenyl, 2-methylphenyl, 2-trifluoromethylphenyl, or 3-bromophenyl.
 - 9. (Canceled)
- 10. (Currently Amended) The compound according to Claim [[9]] $\underline{1}$, wherein \mathbb{R}^3 is hydrogen or methyl.
- 11. (Previously Presented) The compound according to Claim 1, wherein R¹ is phenyl which is optionally mono- or di-substituted independently with alkyl, halo, or haloalkyl.
- 12. (Previously presented) The compound according to Claim 11, wherein R¹ is phenyl, 2,3-dichlorophenyl, 2-fluorophenyl, 2-methylphenyl, 2-trifluoromethylphenyl, or 3-bromophenyl.
 - 13. (Canceled)
- 14. (Previously Presented) The compound according to Claim 11, wherein R² is optionally substituted piperazin-1-yl or optionally substituted piperidin-4-yl.

Atty Docket No.: R0142B-REG USSN: 10/663.335

- 15. (Original) The compound according to Claim 14, wherein R² is piperazin-1-yl, 4-methylpiperazin-1-yl, 3,5-dimethylpiperazin-1-yl, N-methyl piperidin-4-yl or piperidin-4-yl.
- 16. (Previously Presented) The compound according to Claim 15, wherein R³ is hydrogen or methyl.
 - 17. (Canceled)
- 18. (Previously Presented) The compound according to Claim 15, wherein R¹ is phenyl which is optionally mono- or di-substituted independently alkyl, halo, haloalkyl.
- 19. (Original) The compound according to Claim 18, wherein R² is optionally substituted piperazin-1-yl or optionally substituted piperidin-4-yl.
- 20. (Previously Presented) The compound according to Claim 19, wherein R³ is hydrogen or methyl.
- 21. (Previously Presented) A method for producing a compound of claim 1, said method comprising contacting a substituted indole of the formula:

$$\mathbb{R}^2$$
 \mathbb{N}
 \mathbb{R}^3

wherein R3 is alkyl and p, R2 and R4 are as recited in claim 1,

- (i) with a base to produce a deprotonated indole; and
- (ii) contacting the deprotonated indole with a sulfonylating agent of the formula:

Y-SO₂-R¹, where Y is halide and R¹ is as recited in claim 1, or a disulfide agent of the formula: R¹-S-S-R¹ to produce a 2-substituted indole of the formula:

HALLR6#156306 v1

Page 4 of 7

R0142B-REG

Atty Docket No.: R0142B-REG

USSN: 10/663,335

$$\mathbb{R}^2$$
 $\mathbb{S}(0)_{\overline{n}} \mathbb{R}^1$
 \mathbb{R}^4

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- (iii) oxidizing the sulfur with an oxidizing agent; and
- (iv) optionally removing R³ to produce the compound of claim 1.
- 22. (Previously Presented) The method of Claim 21, wherein Y is fluorine.
 - 23. (Original) A composition comprising:
 - (a) a therapeutically effective amount of a compound of Claim 1; and
 - (b) a pharmaceutically acceptable carrier.

24-27 (Canceled)

28. (Previously Presented) A method for enhancing cognitive memory in an Alzheimer's patient, said method comprising administering to said Alzheimer's patient a therapeutically effective amount of a compound of claim 1.